

REMARKS/ARGUMENTS

Favorable reconsideration of the above-referenced application, in view the present Amendment and in light of the following discussion, is respectfully requested.

This Amendment is being filed in response to the Final Office Action mailed on July 25, 2003. Claims 1-11, and 13 are currently pending in the application and Claims 6-12 stand rejected. Claims 1-5 were previously withdrawn from consideration in view of a Restriction Requirement and have been canceled herein without prejudice as requested by the Examiner. Applicants have amended Claims 6 and 13 and have submitted new Claims 14-18.

Claims 6, 9, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Crain (U.S. Patent No. 1,632,176, hereinafter “Crain”) in view of Pfleiderer et al. (U.S. Patent No. 505,175, hereinafter “Pfleiderer”) and Wrasse (U.S. Patent No. 5,176,124, hereinafter “Wrasse”).

Applicants respectfully submit that Crain, Pfleiderer, and Wrasse, individually or in any combination thereof, do not support a *prima facie* case of obviousness of the invention recited in the presently amended independent Claim 6. There are at least two reasons for this conclusion. First, even when combined, these prior art references do not teach or suggest all of the claim limitations recited therein. Second, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.

As to the lack of teaching or suggestion of all of the claim limitations, independent Claim 6 has been amended to now recite, among other limitations, a forge for preparing charcoal grilled foods having at least a first and a second heating section and comprising: a forge conveyer, provided with means to control a transferring velocity of the forge conveyer, to horizontally transfer a pile of burning charcoals through the forge; at least a first and a second temperature sensor located in the at least first and second heating sections,

respectively, configured to detect the heating power inside each of the at least first and second heating sections; and at least a first and a second variable output air blower for supplying combustion air to the pile of burning charcoals in the at least first and second heating sections, respectively, on the basis of the detected heating power inside each of the at least first and second heating sections.

New independent Claim 18 recites a forge grill having, among other limitations, at least a first and a second variable output air blower means for supplying combustion air to the pile of burning charcoals in the first and second heating sections of a forge based on the heating power detected by a first and second temperature sensors in each of the heating sections.

As described in the Specification of the above-referenced application, there are several novel and non-obvious features of the instant invention. The heat intensity produced by the combustion of charcoal is mainly controlled by diffusion of combustion air to the surface of the charcoal, thus increasing the charcoal surface temperature due to the increased surface and/or gas-phase combustion reaction rates, and removal of ash from the charcoal surface, therefore increasing the radiant heat transfer from the burning charcoal to the food being grilled. In order to better control the charcoal combustion process, the instant forge for preparing charcoal grilled foods is provided with multiple heating sections, wherein, in each heating section, regulation of the airflow is accomplished by at least one variable blower on the basis of the detected heating power sensed by means of at least one temperature sensor, thus resulting on a more uniform and improved grilling of the foods on the transportation conveyer (Specification, page 7-11).

Turning the attention now to Crain, this prior art reference discloses a baking oven supported above a fire of burning charcoals transported by a conveyer belt 27 in a single combustion chamber 11. Crain made only two statements regarding combustion air supply.

First, the openings 33 in the bars 32 were designed to admit air into the trough formed by the angle irons 30 and 31, thus supplying sufficient air to the fuel, on the conveyer 27 to thoroughly burn it by the time it reaches the point 28 (Crain, page 1, lines 65-72, emphasis added). Second, the fuel is placed in the fire pot and ignited and the burning coals are carried along by the conveyer 27 through the oven, being supplied by air through the openings 33 so that they are entirely consumed by the time they reach the point 28 (*Id.*, page 2, lines 7-13, emphasis added). Applicants respectfully submit that there is no disclosure in Crain of a “charcoal heat source which required a steady supply of air” (Final Office Action, page 3, lines 7-8). Additionally, in Crain, there is no contact of the flames with the cooking foods because of the presence of a baffle 34; therefore, Crain’s baking oven is not a forge grill—a grill is “an apparatus topped by a grated metal framework for cooking food over direct heat, as a gas or charcoal fire” (Webster’s College Dictionary, Random House, NY, 1991). The Examiner acknowledges that Crane does not teach a temperature sensor, a transportation conveyer, and an air blower.

Pfleiderer discloses a baking oven with a baking plate or surface where the material to be baked may be placed and, after baking, removed without withdrawing such plate or surface from the oven. The Examiner cites Pfleiderer as disclosing “an apparatus comprising a chain, ingredients conveyor.”

Wrasse discloses a barbecue oven consisting of a single base canister 18, a single oven enclosure 13 with an oven cover 12, and a small central cover 10 with a handle 28. Central cover 10 may be removed to add fuel to the fire box and adjusted to control the draft of air flowing through the barbecue. A constant air draft is produced by blower 21 attached to the side of the base canister 18 (Wrasse, col. 2, lines 51-60). An additional method for controlling the temperature within oven 40 is provided by a damper plate 16 at the side of blower 21. Damper plate 16 is rotatable to control the size of the air passage way into

opening 56, thus providing a way for the manual adjustment of the amount of air passing through the barbecue oven (Wrasse, col. 4, lines 6-29).

The Examiner cites Wrasse as teaching an apparatus comprising an air blower and a temperature sensor.

Applicants respectfully submit that Crain does not teach or disclose the subject matter recited in Claim 6, i.e., among other recited elements, a forge grill having at least a first and a second heating section, a forge conveyer with means to control a transferring velocity of the forge conveyer, at least a first and a second temperature sensor located in the first and second heating sections, respectively, to detect the heating power inside each heating section, and at least a first and a second variable output air blower for supplying combustion air to the pile of burning charcoals in the first and second heating sections, respectively, on the basis of the detected heating power inside each heating section.

In addition, Applicants respectfully submit that Pfleiderer, being cited for disclosing an apparatus comprising a chain, ingredients conveyor, and Wrasse, being cited for disclosing an apparatus comprising an air blower and temperature sensor, do not remedy the lack of teaching or disclosure of Crain as just noted.

As to the lack of motivation to combine, the outstanding Final Office Action asserted that it would have been obvious to one of ordinary skill in the art to incorporate the temperature sensor, blower, and damper of Wrasse into the invention of Crain for the reasons that (1) Crain already included a charcoal heat source which required a steady supply of air, since the blower of Wrasse provided a steady amount of air to provide complete combustion; and (2) the damper of Wrasse would have provided a means to regulate the amount of air flow from the blower based upon the detected temperature within the device and thus better control the cooking process.

Applicants respectfully submit that the proposed line of reasoning in support of the combination of Crain and Wrasse is not convincing based on established scientific principles. As previously summarized hereinabove, Crain is silent as to the method of introduction of combustion air into his invention and it does not disclose any steadiness requirement for the air supply. There seems to be confusion between the requirements for complete combustion, i.e., oxidation of all reactive elements in the fuel to products of combustion, and the requirement of a steady supply of combustion air. It is possible, and normally is the case for buoyancy-driven combustion chambers (i.e., combustion chambers without any devices to force air through it, like, for example, a normal fire place at home) for the combustion air to be supplied unsteadily, but nevertheless, sufficient for complete combustion. Crain does not disclose the use of any device, e.g., a blower, to supply air for its combustion chamber—the only two disclosures made by Crain related to air supply have already been summarized hereinabove. From its disclosure, Crain has a buoyancy-driven combustion chamber for which sufficient air is supplied for complete combustion, but most probably not steadily due to its buoyancy-drive characteristic—the strength of the buoyancy-driven flow is a function of the average temperature in the combustion chamber, which temperature is always changing due to the unsteadiness of the combustion process. Therefore, the line of reasoning in support of the proposed modification of Crain's buoyancy-driven combustion chamber with the blower, temperature sensor, and damper of Wrasse's forced-air combustion chamber is not convincing and can only be reasonably explained by use of hindsight based on Applicants' disclosed invention.

“The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result

would have been produced by their combination" (M.P.E.P. § 2144, citing *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983)).

Therefore, Crain, Pfleiderer, and Wrasse, individually or in any combination thereof, do not make obvious the invention recited in the presently amended Claim 6. Furthermore, Claims 9 and 13 are allowable, among other reasons, as depending directly from Claim 6, which is allowable. For the foregoing remarks, Applicants respectfully request that the Examiner withdraw the rejection of Claims 6, 9, and 13 under 35 U.S.C. § 103(a).

Claims 7, 8, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crain in view of Pfleiderer and Wrasse, as to Claims 6, 9, and 13 above, and further in view of Nalbach (U.S. Patent No. 2,390,455, hereinafter "Nalbach"). The Examiner cites Nalbach as a reference disclosing "an apparatus comprising a mesh or net conveyor." In addition, Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Crain in view of Pfleiderer and Wrasse, as applied to Claims 6, 9, and 13 above, and further in view of Harris (U.S. Patent No. 3,897,722, hereinafter "Harris"). The reference Harris is cited only for teaching "a cooking device comprising a brush for applying sauce."

Nalbach and Harris, being cited for the disclosure of an apparatus comprising a mesh or net conveyer and a cooking device comprising a brush for applying sauce, respectively, do not remedy the above-noted deficiencies of Crain, Pfleiderer, and Wrasse. For this reason, Applicants respectfully submit that Crain, Pfleiderer, Wrasse, Nalbach, and Harris, individually or in any combination thereof, do not support a finding of obviousness of the invention recited in Claims 7, 8, 10, and 11 and respectfully request that the Examiner withdraw the rejection of those claims under 35 U.S.C. § 103(a).

Applicants have submitted herein new Claims 14-18, which are supported by subject matter disclosed on the as-filed Specification and Drawings. As to Claim 14, please see, for example, pages 6 and 8 of the Specification. As to Claims 15 and 16, please refer, for

example, to element 8 in FIG. 1 and pages 7 and 8 of the Specification. As to Claim 17, please see, for example, page 15 of the Specification. Finally, as to Claim 18, please refer to, for example, page 11 of the Specification. Based at least on the foregoing reasons related to the rejection of Claims 6-11, and 13, Applicants respectfully submit that new Claims 14-18 are allowable over Crain, Pfleiderer, Wrasse, Nalbach, and Harris.

Finally, the proposed amendments to Claims 6 and 13 and new Claims 14-18 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search.

Applicants respectfully submit that Claims 6-11, 13, and 14-18 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited.

Respectfully submitted,

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